

ARTICLE VI. WATER EFFICIENCY

Sec. 70-552. Definitions.

The definitions below are applicable to all Divisions within this Article VI. The following words and phrases and their derivation shall have the meaning as set forth below. The word “shall” is always mandatory and never directory.

City Water means potable water supplied through pipes by the City to Users.

Director means the Director of the City of Durham’s Department of Water Management or his/her designee.

Drip Irrigation means the application of City water to the ground through drip emitter devices emitting drops or small streams at low pressure, volume, and velocity near or at ground level.

Even-numbered properties mean properties with addresses that end in even-numbered digits, and other properties so designated by the Director.

Inspection means an entry into and examination of premises for the purpose of ascertaining compliance with the requirements of this Ordinance.

Installer means any Person that constructs, installs and/or repairs irrigation systems.

Irrigate or Irrigation means apply, or the application of, City water to outdoor soil or landscape surfaces.

Irrigation system means a device or combination of devices having a hose, pipe, or other conduit which transmits City water to outdoor soil or landscape surfaces.

Odd-numbered properties mean properties with addresses that end in odd-numbered digits, and other properties so designated by the Director.

Public Purpose Athletic or Recreational Field means an athletic or recreational field owned or leased by a public or not-for-profit entity which is operated for public use, through general invitation and is not operated for the purpose of profit.

Public Purpose Botanical Site means a site owned or leased by a public or not-for-profit entity in which a variety of plants are grown for scientific purposes or for education of the public.

Rain sensor means an automatic device that will override the irrigation cycle of an irrigation system and turn it off when a predetermined amount of rain has fallen or a moisture parameter is met that is equivalent to that amount of rain.

Recreational Field means an athletic or recreational field that is not located at a residence.

Runoff means City water which is not absorbed by the outdoor surface to which it is applied.

Soil moisture sensor means a calibrated automatic device that is designed to measure the quantity of water contained in a material, such as soil, on a volumetric or gravimetric basis and override the irrigation cycle of the irrigation system and turn it off when a pre-determined soil moisture level is reached.

User means any Person who is an owner or occupant of real property, whether inside or outside of the City, to which water is supplied by the City, or who uses water supplied by the City, or who is billed for water supplied by the City, or who is responsible for or otherwise has the right or permission to utilize water supplied by the City.

Water Conservation Plan means the plan submitted to the Director by large users, botanical sites, recreational fields and other special water users specifying particular conservation measures, including irrigation measures, to be employed during stages of water shortage.

Water Shortage Response Plan refers to a written plan required under State law that is approved by the Director and the Manager for submission to the State, and which establishes, among other things, various levels of response to water shortage and the triggers for such levels.

Water waste refers to any non-beneficial use of City water.

DIVISION 1. Year-Round Water Efficiency Requirements

Sec. 70-553. Purpose and intent.

It is the purpose and intent of this Division to:

- (a) Assure that available water resources are put to reasonable beneficial uses and maximize the efficient use of the city water supply so as to potentially avoid unnecessary water supply expansion;
- (b) Reduce damage to publicly-owned streets and sidewalks caused by landscape runoff and overspray;
- (c) Increase safety on streets and sidewalks by reducing the potential for pooling and frozen water on such areas; and
- (d) Prevent pollution of streams, lakes, and other surface waters by reducing water runoff from landscaped areas.

This Division shall be liberally construed to effectuate this purpose and intent.

Sec. 70-554. Mandatory irrigation efficiency requirements.

The following requirements are applicable to all Users:

(a) *Year Round Irrigation schedule for spray irrigation systems.*

(1) *Spray Irrigation.* Users shall not operate spray irrigation systems more than three days per week and shall follow the following irrigation schedule:

(A) Even-numbered properties may be irrigated only on Sundays, Wednesdays, and/or Fridays.

(B) Odd-numbered properties may be irrigated only on Tuesdays, Thursdays, and/or Saturdays.

(C) Irrigation may not occur between 10:00 a.m. and 6:00 p.m.

(2) *Exemptions from Year Round Requirements.* The restrictions in (a) above shall not apply to the following:

(A) Properties using drip irrigation, hand watering, or tree or shrub watering bags;

(B) Watering of containerized plants and commercial plant stock in trade for sale;

(C) Outdoor irrigation necessary to establish newly sodded or seeded lawns or new non-turf plant materials within the first 45 days of planting provided that the customer secures a written license from Director, and prominently displays the license. A limit of two licenses per address per year may be issued, and licenses may be revoked for cause.

(D) Irrigation for a maximum of one day necessary when treatment with an application of chemicals requires immediate watering to preserve an existing landscape or to establish a new landscape, provided that such irrigation does not occur between the hours of 10:00 a.m. and 6:00 p.m.

(E) City water used to control dust or to compact soil when alternate methods are not available.

(F) Visually supervised operation of irrigation systems for short periods of time to check system condition and effectiveness.

(G) City water applied to prevent or abate health, safety, or accident hazards when alternate methods are not available.

(H) City water used for construction or maintenance activities where the application of water is the appropriate methodology and where no other practical alternative exists.

(I) Public purpose athletic fields, recreational fields, and botanical sites operated in compliance with a Water Conservation Plan that has been approved by the Director. The plan must specify the conservation measures and irrigation operating modes to be employed at the site year-

round and during successive stages of a declared water shortage.

- (b) *Sensor requirement for new and existing irrigation systems.* Users and installers shall not install automatic irrigation systems of any type without a rain or soil moisture sensor that will prevent irrigation during periods of rainfall and when there is sufficient moisture in the ground for plant health and survival. Existing irrigation systems shall install a rain or soil moisture sensor by November 30, 2009.
- (c) *Sensor settings.* All rain sensors shall be adjusted and set so that they automatically shut off the irrigation system after not more than one-fourth (1/4) inch of rainfall has occurred or an equivalent moisture parameter is reached. All rain sensors shall be installed according to manufacturer's instructions in a location that will provide full exposure to rainfall or appropriate moisture parameter such that accuracy of operation is assured. All rain sensors shall be maintained in good working condition. No person shall adjust either the rain sensor or irrigation system so that the sensor is not able to override and turn off the irrigation system after one-fourth inch of rain has fallen or an equivalent moisture parameter is reached.
- (d) *Hand operated equipment.* All hoses used for hand watering, vehicle washing, or other allowable outdoor uses shall be equipped with shutoff nozzles.
- (e) *System design.* All irrigation systems shall be designed, maintained, and operated to prevent, to the extent practicable, water from flowing onto paved or other impervious surfaces.

Sec. 70-555. Prohibition of Water Waste.

No User shall:

- (a) Cause or allow run off of City water from landscape areas into adjoining impervious areas, adjacent property, or streets, sidewalks, gutters, stormwater drains, or other paved surfaces as a result of incorrectly directed or maintained sprinklers, irrigation systems, or other application devices, or excessive watering.
- (b) Cause or allow irrigation while precipitation is falling.
- (c) Knowingly allow water to escape through leaks, breaks or malfunction within the water user's plumbing or distribution system for any period of time beyond which such a leak or break should reasonably have been repaired or corrected. All leaks, breaks or malfunctions shall be corrected within 30 days of identification of the source of the leak.
- (d) Use or allow the use of water or flushing from any public or private fire

hydrant for any purpose other than fire suppression, necessary fire hydrant or water distribution system maintenance, public emergency, or with prior approved written exception from the City.

- (e) Willfully or negligently waste water in a manner not otherwise prohibited above.
- (f) The prohibitions listed in the subsections above do not apply to:
 - (1) Water waste that occurs prior to June 1, 2009;
 - (2) Flow from firefighting, inspection of fire hydrants, fire training activities, or from similar government activities;
 - (3) Water applied to prevent or abate health, safety, or other hazards when reasonable alternate methods are not available; and
 - (4) Flow resulting from the inspection, operation, or maintenance of a public utility system.

Sec. 70-556. Enforcement and Variances

This Division may be enforced, and the provisions of this Division may be Varied, through the provisions contained in Division 3 below.

Sec. 70-557. Relationship to Water Shortage Stages

The requirements of this Division may be superseded by a declaration of a Water Supply Shortage or Emergency, or by mandatory water restrictions set forth in Division 2 of Article VI.

Secs. 70-558 – 70-562. Reserved.

DIVISION 2. Water Shortage Response Requirements

Sec. 70-563. Purpose and intent.

It is the purpose and intent of this Division to ensure that available water resources are put to reasonable beneficial uses to avoid depletion of the city water supply during a water shortage. This Division shall be liberally construed to effectuate such purpose and intent.

Sec. 70-564. Response to water shortage.

The Director shall report to the City Manager conditions adversely affecting the city water supply that trigger mandatory restrictions prescribed by the City's Water Shortage Response Plan. Upon receiving such report, the City Manager will declare a water shortage to exist and will enact the appropriate stage of water restriction as outlined in the City's Water Shortage Response Plan. The restrictions required under each stage shall be as set forth in this Division. The City Manager or the City Council may terminate any stage of water restriction once the triggers for rescission prescribed by the Water Shortage Response Plan occur. The imposition of drought-related mandatory construction restrictions shall be in accordance with section 70-557 below.

Sec. 70-565. Water Conservation Plan Requirements for Large Users and Others.

All Users of more than 100,000 gallons per day, or that own Botanical Sites, or Recreational Fields, or Golf Courses, and other Users whose water use is determined by the Director to be unique or amenable to individually determined controls shall have a Water Conservation Plan on file with the Department of Water Management. New Users shall submit such a plan within six months of beginning operation, or within such time period as allowed by the Director. The Plan must specify the conservation measures to be used by the site or sites of the entity during successive stages of a declared water shortage, which measures shall be targeted to achieve the general percentage reductions for each stage as set forth in this Ordinance. For Botanical Sites and Recreational Fields, the Plan must specify the irrigation operating modes to be employed at the site year-round and during successive stages of a declared water shortage. The Director may approve, disapprove, or require modifications to the Plan. An approved plan may vary the requirements of this Division. The User shall operate in accordance with the approved Plan and shall keep records as required to document compliance with the Plan. Users that do not have an approved Plan are subject to all of the requirements of this Division.

Sec. 70-566. Mandatory Water Restriction Stages.

(a) *Stage 1 Water Shortage.* Upon declaration of a stage 1 water shortage, users shall comply with the following measures:

(1) *Spray Irrigation.* Users shall not operate spray irrigation systems more than one day per week as specified by the director and based on the location address. Irrigation may not occur between 10:00 a.m. and 6:00 p.m.

(2) *Irrigation Exemptions.* The restrictions in (1) above shall not apply to the following:

- (A) Properties using drip irrigation, hand watering, or tree or shrub watering bags;
- (B) Watering of containerized plants and commercial plant stock in trade for sale;
- (C) Irrigation for a maximum of one day necessary when treatment with an application of chemicals requires immediate watering to preserve an existing landscape or to establish a new landscape, provided that such irrigation does not occur between the hours of 10:00 a.m. and 6:00 p.m.;
- (D) Visually supervised operation of irrigation systems for short periods of time to check system condition and effectiveness;
- (E) Recreational fields, golf courses, and botanical sites operated in compliance with an approved Water Conservation Plan;
- (F) New landscape exemptions granted *prior* to the declaration of a water shortage. Such exemptions will continue to be honored until the original expiration date of the exemption.

No exemptions shall be issued while a water shortage declaration is in effect.

- (G) Properties on which water use is in compliance with an approved Water Conservation Plan.

(3) *Additional Requirements.* In addition to the above restrictions, no User shall:

- (A) Add water to any decorative fountain, pool or pond except where the water is recycled.
- (B) Serve water in a restaurant or similar establishment except upon request.
- (C) Add water to wading pools or swimming pools except to the extent necessary to replenish losses due to evaporation or spillage, and maintain operation of chemical feed equipment.

(4) *Water Consumption Reduction Goal.* Users of more than 100,000 gallons a day shall attempt to reduce water consumption by 15% and shall document such efforts. The goal for Stage 1 for Water Conservation Plans submitted by large users and other special users shall be to reduce consumption by 15%.

(b) *Stage 2 Water Shortage.* Upon declaration of a stage 2 water shortage, users shall continue to comply with Stage 1 measures, and the following additional Stage 2 measures, which supplant Stage 1 requirements where they are more restrictive:

(1) *Spray Irrigation.* Spray irrigation of landscapes with city water shall be prohibited.

(2) *Irrigation Exemptions.* The restrictions in (1) above shall not apply to the following:

- (A) Properties using drip irrigation, hand watering, or tree or shrub watering bags;
- (B) Watering of containerized plants and commercial plant stock in trade for sale;
- (C) Irrigation for a maximum of one day necessary when treatment with an application of chemicals requires immediate watering to preserve an existing landscape, provided that such irrigation does not occur between the hours of 10:00 a.m. and 6:00 p.m.;
- (D) Visually supervised operation of irrigation systems for short periods of time to check system condition and effectiveness;
- (E) Recreational fields, golf courses, and botanical sites operated in compliance with an approved Water Conservation Plan;
- (F) New landscape exemptions granted *prior* to the declaration of a water shortage. Such exemptions will continue to be honored until the original expiration date of the exemption. No exemptions shall be issued while a water shortage declaration is in effect.

- (3) *Vehicle Washing.* Users shall not use city water to wash vehicles, except at a commercial or institutional car wash facility. Commercial or institutional car washes shall be allowed to operate if they comply with the requirements of this ordinance.
 - (4) *Surface Washing.* No city water shall be used for cleaning or washing exterior building surfaces, decks, or paved areas, such as sidewalks, driveways, roadways and parking lots. This restriction shall NOT apply to the cleaning of exterior surfaces or decks prior to painting or re-painting, or for any *surface where a health or safety issue arises.*
 - (5) *Water Consumption Reduction Goal.* Users of more than 100,000 gallons a day shall attempt to reduce water consumption by 30% from pre-declaration consumption and shall document such efforts. The goal for Stage 2 for Water Conservation Plans submitted by large users and other special users shall be to reduce consumption by 30%.
- (c) *Stage 3 Water Shortage.* Upon declaration of a stage 3 water shortage, Users shall continue to comply with Stage 1 and 2 measures, and the following additional Stage 3 measures, which supplant Stage 1 and 2 requirements where they are more restrictive:
- (1) No city water shall be used for the purpose of irrigation except for watering of containerized plants and commercial plant stock in trade for sale.
 - (2) No city water shall be used for any other outdoor purpose, except for emergency fire suppression or other activities necessary to maintain public health, safety, or welfare.
 - (3) The use of city water for heating and/or cooling purposes shall be reduced in all but the most essential facilities to the extent practical in consideration of the indoor air quality standards, weather conditions, and health and safety requirements.
 - (4) No city water shall be used to wash any motor vehicle except at commercial or institutional car washes that are in compliance with the requirements of this ordinance.
 - (5) *Water Consumption Reduction Goal.* Users of more than 100,000 gallons a day shall attempt to reduce water consumption by 50% from pre-declaration consumption and shall document such efforts. The goal for Stage 3 for Water Conservation Plans submitted by large users and other special users shall be to reduce consumption by 50%.

Notwithstanding the restrictions specified in (c), the protection of public health, safety, and welfare may, under special circumstances, require the use of limited amounts of city water. Such uses shall be permitted during declared water shortages, provided that other practical alternatives are not available and water is used in the least amount practical.

(d) *Stage 4 Water Supply Emergency.* Upon declaration of a water supply emergency, users shall continue to comply with Stage 1, 2 and 3 measures, and the following additional Stage 4 measures, which supplant Stage 1, 2 and 3 requirements where they are more restrictive:

- (1) All outdoor uses of water are prohibited, except for emergency fire suppression or other activities necessary to maintain public health, safety, or welfare.
- (2) The use of water for washing or cleaning mobile equipment including automobiles, trucks, boats and fleet vehicles is prohibited.
- (3) No user shall add water to decorative fountains, pools, or ponds.
- (4) No user shall add water to wading pools or swimming pools, including hot tubs, spas and whirlpool tubs except for health and rehabilitative purposes as prescribed by a medical doctor or administered by a medical facility.
- (5) All other uses of water will be limited to those necessary to meet minimum health and safety needs of the customers as determined by the city manager upon consultation with the director in light of conditions present. Water service may be discontinued or reduced to designated users or in designated portions of the city service area in order to preserve the availability of water for essential public health and safety requirements, such as fire protection, hospitals, clinics and other critical community needs.
- (6) The city manager may enact additional measures aimed at reducing water use for any users as conditions warrant. Users shall comply with any directives issued by the city manager to this effect.

Sec. 70-567. Additional drought-related mandatory construction restrictions.

Upon receiving a report from the city manager that additional water conservation measures are necessary to adequately address a water shortage, the city council may declare by resolution that an existing water shortage requires imposition of stage 2, 3, or 4 mandatory drought-related construction restrictions. Such action shall be taken separately from the imposition of water conservation stages described in the previous section of this division. The council's resolution may declare one or more stages of mandatory construction restrictions, and may, additionally authorize the city manager to declare subsequent stages of construction restrictions. The city council may modify or terminate any stage of mandatory drought-related constructions restrictions upon determining that the restrictions are no longer necessary, or by resolution may authorize the manager to do the same.

(a) *Stage 2 Water Shortage: Additional Drought-Related Mandatory Construction Restrictions.* The following restrictions shall be in place during the time that stage 2 construction restrictions have been declared, until such are modified or terminated:

- (1) Water lines permitted prior to imposition of stage 2 construction restrictions may be constructed, flushed, and placed into service;
- (2) Water lines not permitted prior to imposition of stage 2 construction restrictions may be permitted and constructed, but shall be subject to stage 3 construction restrictions if such are declared prior to lines being flushed and placed into service
- (3) Structures with existing valid building permits that do not expire may be completed, with necessary individual water connections;
- (4) Building permits issued after declaration of stage 2 constructions restrictions are subject to stage 3 and/or stage 2 construction restrictions if such are declared prior to the permitting of a water connection or meter installation;
- (5) All water used for the flushing of water lines shall be collected and used only as permitted by the city;
- (6) Swimming pools, spas, and hot tubs not already in operation shall only be filled with non-city water, and receipts for purchases of such water shall be retained.

(b) *Stage 3 Water Shortage: Additional Drought-Related Mandatory Construction Restrictions.*

The following restrictions shall be added to those in stage 2 above, or, where more exacting, shall supersede those restrictions, during the time that stage 3 construction restrictions are declared, until such as are modified or terminated.

- (1) Water lines that were not permitted prior to imposition of stage 2 construction restrictions shall not be flushed or placed into service;
- (2) Water connections and meter installations shall not be allowed for structures that received building permits after stage 3 construction restrictions were declared;
- (3) Permits for the construction or installation of swimming pools, spas, hot tubs including any associated electrical work shall not be issued;
- (4) Plans for water lines shall be accepted and reviewed but no permit for extension or construction of a water line shall be issued;
- (5) All permits for water line extensions not already under construction shall be suspended.

(c) *Stage 4 Water Emergency: Additional Mandatory Construction Restrictions.*

The following restriction(s) shall be added to those in stages 2 and 3 above, or, where more exacting, shall supersede those restrictions, during the time that stage 4 construction restrictions are declared, until such are modified or terminated.

Certificates of occupancy for new structures requiring public water service shall not be issued until a return to stage 3 or a lower stage.

(d) *Exceptions to construction restrictions.* Public projects are exempted from the above restrictions. In addition, any person may secure a written license from the city manager or his designee to engage in an activity prohibited under the additional mandatory construction restrictions where one or more of the following circumstances are demonstrated to exist:

- (1) Service is for an existing residence with a contaminated or failed well and the residence has access to an existing water line;
- (2) Permits are for renovations to an existing structure with water service;
- (3) Peculiar and unique hardships exist involving one or more of the following, or similar situations: unsafe or temporary housing, subsidized housing involving unique permitting or financing arrangements; and responses to fire or other disasters which require the construction activity.

Sec. 70-568. Scope and duration.

Water shortage response measures shall be applicable to all Users of the system, including Users located outside the city. Response measures shall be in force until they are terminated by the city manager or the city council. Notice of conservation measures shall be broadly reported to the media, and shall, where feasible, be included on customers' utility bills.

Sec. 70-569. Enforcement and Variances

This Division may be enforced, and the provisions of this Division may be varied, through the provisions contained in Division 3 below.

Secs. 70-570—70-572. Reserved.

DIVISION 3. Remedies, Enforcement, and Variances.

Sec. 70-573 Violations, Enforcement, and Penalties.

(a) *Violation.* Noncompliance with the requirements of this Article constitutes a violation, and is unlawful. Violations may be remedied through the provisions of this Division which supplement any other civil and criminal remedies available under law. Remedies are not exclusive and may, without limitation, be exercised singly, in combination, or cumulatively.

(b) *Enforcement.* The Director shall enforce the requirements of this Article, and shall issue notices, orders, assess penalties, and direct other actions as necessary. Among other things, the Director is authorized to remediate any violations and, pursuant to written guidelines, modify previously issued penalties.

(c) *Warnings; Notice of Violation*

- (1) *Warnings.* If a violation occurs, the Director shall issue one or more warnings. At least one written warning shall be issued prior to issuance of the first notice of violation requiring corrective action and/or assessing a penalty. Subsequent oral or written warnings are not required if the violation is for the same activity, or lack thereof, that resulted in previous violations and penalties.
- (2) *Notice of Violation.* If the violation does not cease after one or more warnings, the Director shall issue a written notice of violation to each responsible User. Such notice shall be given prior to ordering a corrective action, imposing a civil penalty, or terminating water service as the result of a violation.
- (3) *Service.* Notice shall be served by one of the following means: personal delivery; certified or registered mail, return receipt requested; any means authorized for service of documents by Rule 4 of the NC Rules of Civil Procedure; or first class mail addressed to the violator accompanied by posting of the notice at the violator's residence or place of business, as may be appropriate.
- (4) *Contents.* The notice shall identify the location of the violation; the responsible User(s); the nature of the violation; the time period, if any, allowed for corrective action; a City contact person and contact information; the process and deadlines for contesting the violation; and a general description of potential enforcement actions available to the City, including but not limited to civil penalties and termination of water service.

(d) *Civil Penalty and Discontinuation of Utility Service.* If, after issuance of notice of violation, the violation does not cease, the Director may assess civil penalties in accordance with the schedule below. Increasing civil penalties and utility termination may only be imposed if the violation is for the same activity, or lack thereof, that resulted in the previous warning or civil penalty, and occurs within two years of the City's previous action regarding the matter.

- (1) *Schedule of Progressive Steps and Penalties.* The following actions and penalties may be imposed by the Director. Civil penalties may be assessed only after the time period for an appeal has expired, or after a determination on an appeal has been made.
 - i. First violation: Corrective Action.
 - ii. Second violation: Civil penalty of \$100.00
 - iii. Third violation: Civil penalty of \$250.00
 - iv. Fourth violation: Termination of water service
- (2) *Discontinuance of water service.* The city may discontinue water service to any property upon the fourth violation, or upon nonpayment of the civil penalties that have been added to the User's utility bills

pursuant to (e) below. If termination is for a fourth violation, a notice of violation shall be sent as described above. If it is for nonpayment, the notice and procedures otherwise applicable in City ordinance shall apply. Service reconnection shall only be allowed upon payment of any past due utility bills, including but not limited to civil penalties and reconnection charges.

- (e) *Assessment of Penalties.* Notice of civil penalties imposed shall be given by first class mail, and may subsequently be added to the violator's utility bills.

Sec. 70-574. Variances

- (a) Administrative variances of the restrictions in this Article may be issued by the Director provided that the general intent of this Article is met, compliance is proven to cause practical difficulties and unnecessary hardship, and all reasonable options for abatement through modified water management have been exhausted. The criteria to determine hardship shall include but not be limited to the level of capital outlay and time required to achieve compliance.
- (b) Variances may be issued for a time-limited period, and shall stipulate both short-term corrective measures and a schedule for completion of long-term corrective measures. Variances may be renewed for good cause shown.

Sec. 70-575. Appeal.

- (a) *Time for Appeal.* A User may appeal a determination of a violation, or any penalty for violation to the Director by filing an appeal within seven (7) calendar days of receiving a notice of violation. The appeal shall identify the property and state the grounds of appeal together with all material facts in support thereof. Violations already appealed may not be appealed again if a determination regarding the contested facts has already been made.
- (b) *Meeting.* A User who appeals shall be offered the opportunity for a meeting with the Director, and may present any information in addition to that presented in writing. Notice of the meeting time shall be sent certified or registered mail, return receipt requested.
- (c) *Decision.* The decision of the Director shall be in writing and shall explain the basis for the decision, and the penalty imposed. If corrective action is ordered, the Director shall specify the time frame during which it must be taken so as to avoid additional penalties.

Secs. 70-576 – 70-577. Reserved.

